CLAIMS

1. A peptide which comprises any one of the amino acid sequences selected from a group consisting of:
Arg Tyr Phe Pro Asn Ala Pro Tyr Leu (SEQ ID NO: 2),
Arg Tyr Pro Gly Val Ala Pro Thr Leu (SEQ ID NO: 3),
Arg Tyr Pro Ser Cys Gln Lys Lys Phe (SEQ ID NO: 4),
Ala Tyr Leu Pro Ala Val Pro Ser Leu (SEQ ID NO: 5), and
Asn Tyr Met Asn Leu Gly Ala Thr Leu (SEQ ID NO: 6).

2. The peptide according to claim 1, which consists of any one of the amino acid sequences selected from a group consisting of SEQ ID NOs: 2, 3, 4, 5, and 6.

3. A peptide which comprises an altered amino acid sequence wherein an alteration of an amino acid residue is comprised in any one of the amino acid sequences selected from a group consisting of SEQ ID NOs: 2, 3, 4, 5, and 6, and which has an activity to induce a CTL in an HLA-A24-restricted manner, except for a peptide comprising the amino acid of SEQ ID NO: 7.

4. The peptide according to claim 3, which comprises an altered amino acid sequence wherein leucine at position 9 in any one of the amino acid sequences selected from a group consisting of SEQ ID NOs: 2, 3, 5, and 6 is substituted by phenylalanine, tryptophan, isoleucine, or methionine.

5. The peptide according to claim 3, which comprises an altered amino acid sequence wherein phenylalanine at position 9 in the amino acid sequence of SEQ ID NO: 4 is substituted by tryptophan,

leucine, isoleucine, or methionine.

6. The peptide according to claim 3, which comprises an altered amino acid sequence wherein cysteine at position 5 in the amino acid sequence of SEQ ID NO: 4 is substituted by alanine, serine, or α-aminobutyric acid (SEQ ID NO: 66, 67, or 68).

7. The peptide according to any one of claims 3 to 6, which consists of an altered amino acid sequence wherein an alteration of an amino acid residue is comprised in any one of the amino acid sequences selected from a group consisting of SEQ ID NOs: 2, 3, 4, 5, and 6.

8. A polynucleotide which encodes the peptide according to any one of claims 1 to 7.

9. The polynucleotide according to claim 8, which encodes any one of the amino acid sequences selected from the group consisting of SEQ ID NOs: 2 to 6, and 66 to 68.

10. An expression vector which contains the polynucleotide of claim 8 or 9.

11. A cell which comprises the expression vector of claim 10.

12. A process for preparing a peptide according to any one of claims 1 to 7, which comprises culturing the cell according to claim 11 in a condition operable for the expression of peptides.

13. An antibody which specifically binds to the peptide according to any one of claims 1 to 7.

14. An antigen-presenting cell on which a complex between a cancer antigen peptide derived from the peptide according to any one of claims 1 to 7 and an HLA-A24 antigen is presented.

15. The antigen-presenting cell according to claim 14, on which a complex between a cancer antigen peptide consisting of any one of the amino acid sequences selected from the group consisting of SEQ ID NOs: 2 to 6 and 66 to 68 and an HLA-A24 antigen is presented.

16. A CTL which recognizes a complex between a cancer antigen peptide derived from the peptide according to any one of claims 1 to 7 and an HLA-A24 antigen.

17. The CTL according to claim 16, which recognizes a complex between a cancer antigen peptide consisting of any one of the amino acid sequences selected from the group consisting of SEQ ID NOs: 2 to 6 and 66 to 68 and an HLA-A24 antigen.

18. A pharmaceutical composition which comprises the peptide according to any one of claims 1 to 7, the polynucleotide according to claim 8 or 9, the expression vector according to claim 10, the cell according to claim 11, the antigen-presenting cell according to claim 14 or 15, or the CTL according to claim 16 or 17, together with a pharmaceutically acceptable carrier.

19. A cancer vaccine which comprises as an effective ingredient the peptide according to any one of claims 1 to 7, the polynucleotide according to claim 8 or 9, the expression vector according to claim 10, the cell according to claim 11, the antigen-presenting cell according to claim 14 or 15, or the CTL according to claim 16 or 17.

20. Use of the peptide according to any one of claims 1 to 7, the polynucleotide according to claim 8 or 9, the expression vector according to claim 10, the cell according to claim 11, the antigen-

presenting cell according to claim 14 or 15, or the CTL according to claim 16 or 17, in the manufacture of a cancer vaccine.

21. A method for treatment or prevention of a cancer, which comprises administering a therapeutically or prophylactically effective amount of the peptide according to any one of claims 1 to 7, the polynucleotide according to claim 8 or 9, the expression vector according to claim 10, the cell according to claim 11, the antigen-presenting cell according to claim 14 or 15, or the CTL according to claim 16 or 17, to a cancer patient in need who is positive for an HLA-A24, and positive for WT1.

22. A pharmaceutical composition which comprises any one of the substances selected from the group consisting of:

a) a peptide which comprises the sequence of Arg Val Pro Gly Val Ala Pro Thr Leu (SEQ ID NO: 7),

b) a polynucleotide which encodes the peptide as shown above a),

c) an expression vector which comprises the polynucleotide as shown above b),

d) a cell which comprises the expression vector as shown above c),

e) an antigen-presenting cell on which a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen is presented, and

f) a CTL which recognizes a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen,

together with a pharmaceutically acceptable carrier.

23. A cancer vaccine which comprises as an effective ingredient any one of the substances selected from the group consisting

of:

a) a peptide which comprises the sequence of Arg Val Pro Gly Val Ala Pro Thr Leu (SEQ ID NO: 7),

b) a polynucleotide which encodes the peptide as shown above a),

c) an expression vector which comprises the polynucleotide as shown above b),

d) a cell which comprises the expression vector as shown above c),

e) an antigen-presenting cell on which a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen is presented, and

f) a CTL which recognizes a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen.

24. Use of any one of the substances selected from the group consisting of:

a) a peptide which comprises the sequence of Arg Val Pro Gly Val Ala Pro Thr Leu (SEQ ID NO: 7),

b) a polynucleotide which encodes the peptide as shown above a),

c) an expression vector which comprises the polynucleotide as shown above b),

d) a cell which comprises the expression vector as shown above c),

e) an antigen-presenting cell on which a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen is presented, and

f) a CTL which recognizes a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen,

in the manufacture of a cancer vaccine.

25. A method for treatment or prevention of a cancer, which comprises administering a therapeutically or prophylactically effective amount of any one of the substances selected from the group consisting of:

a) a peptide which comprises the sequence of Arg Val Pro Gly Val Ala Pro Thr Leu (SEQ ID NO: 7),

b) a polynucleotide which encodes the peptide as shown above a),

c) an expression vector which comprises the polynucleotide as shown above b),

d) a cell which comprises the expression vector as shown above c),

e) an antigen-presenting cell on which a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen is presented, and

f) a CTL which recognizes a complex between a cancer antigen peptide derived from the peptide as shown above a) and an HLA-A24 antigen,

to a cancer patient in need who is positive for an HLA-A24, and positive for WT1.